

Fig. 1

Total US Consumer Payments: Share of Transactions, 1998, %

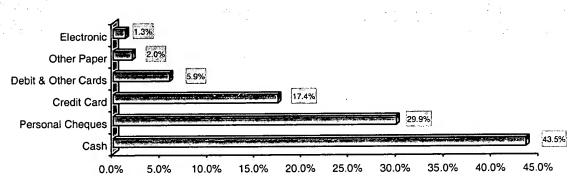


Fig. 2

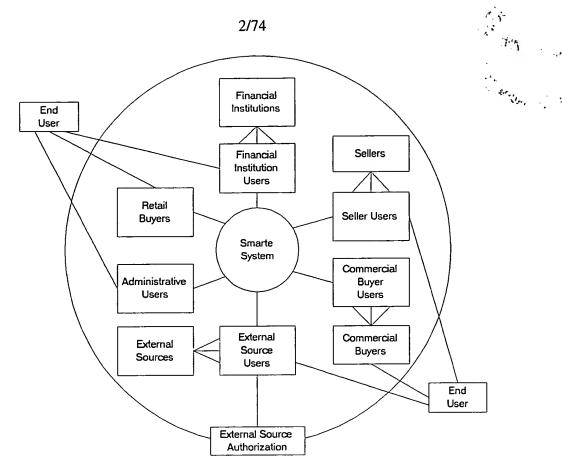


Fig. 3

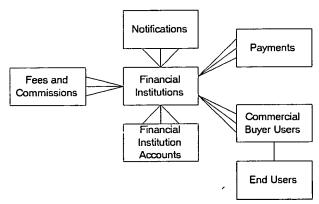
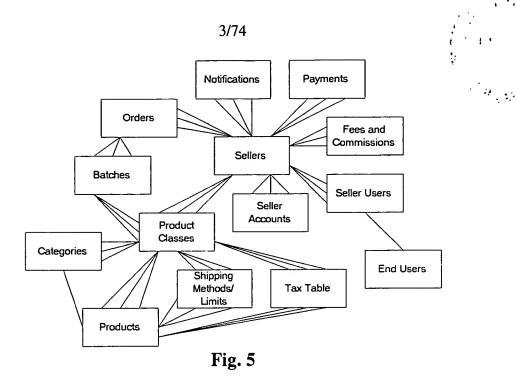


Fig. 4



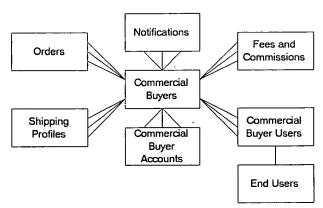
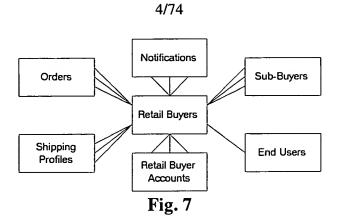
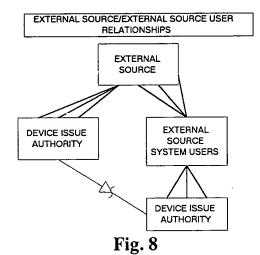
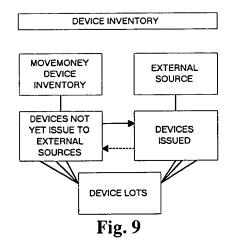


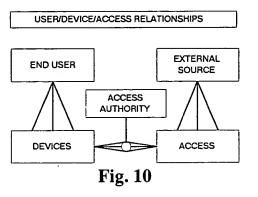
Fig. 6

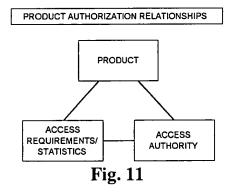












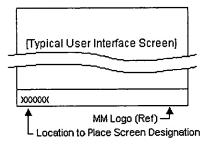
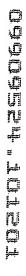


Fig. 12





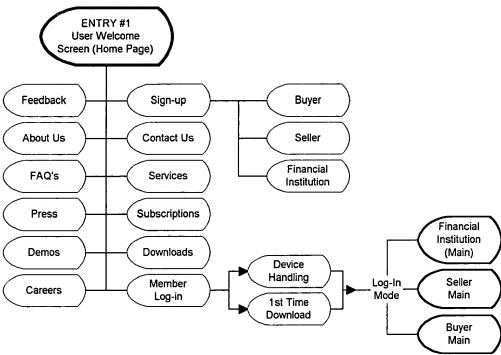


Fig. 13 Main/Home Screen

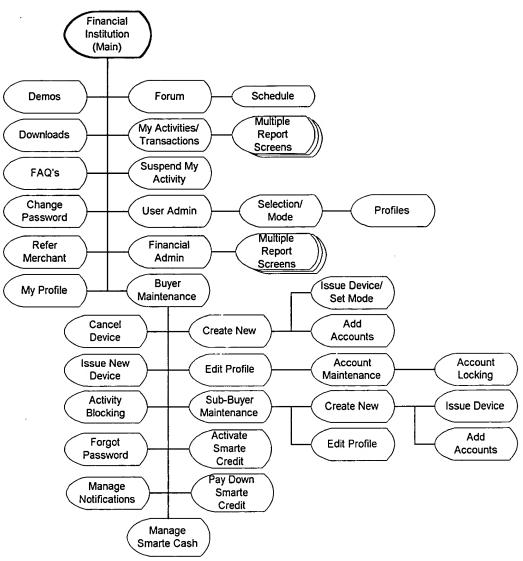


Fig. 14
Financial Institution Main Screen

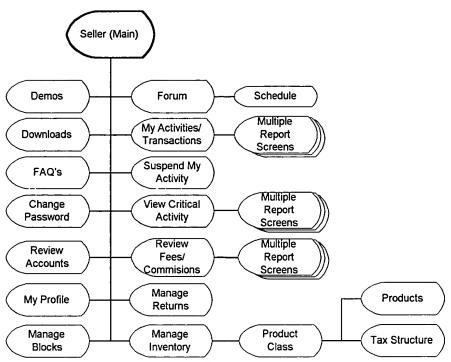


Fig. 15 Seller Main Screen

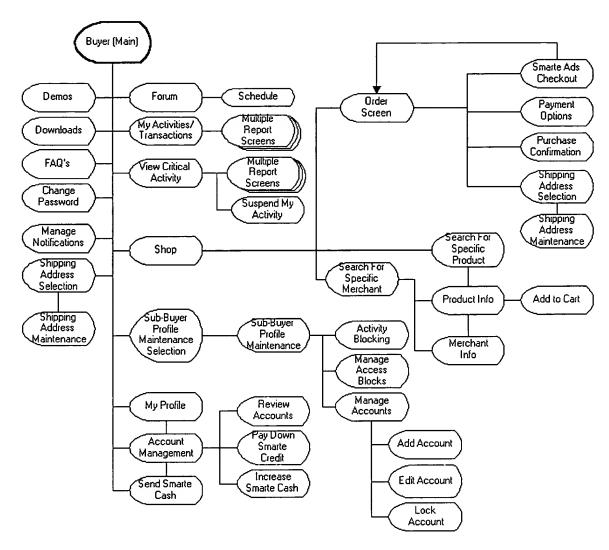


Fig. 16 Buyer Main Screen

and the second

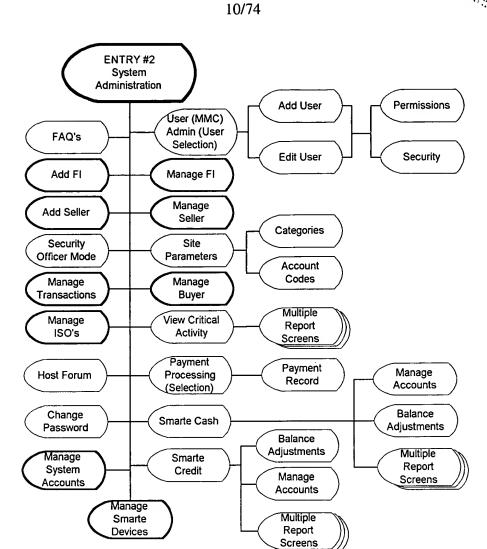


Fig. 17
Administration Main Screens

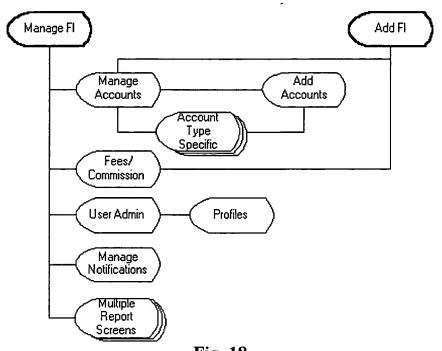
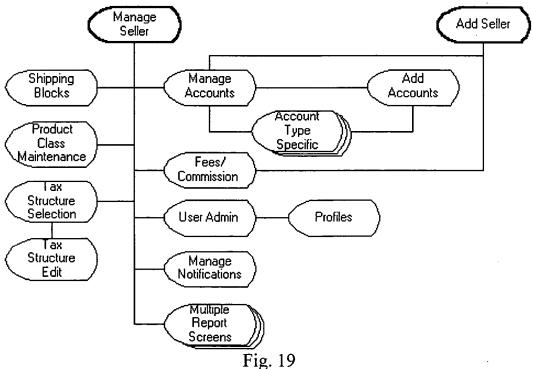
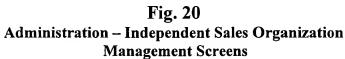


Fig. 18
Administration – Financial Institution Management Screens



Administration - Seller Management Screens



HOMMON' TUNGOLOGO

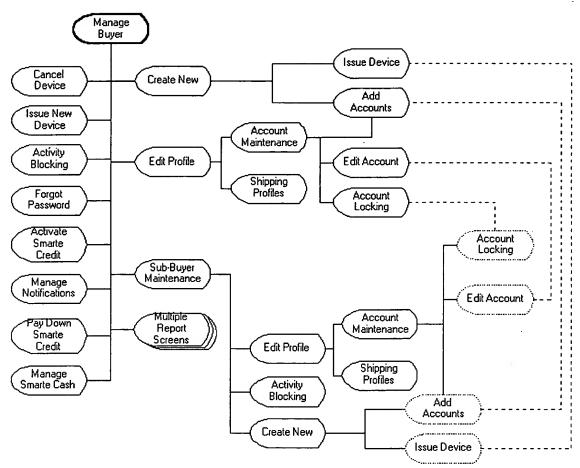


Fig. 21
Administration – Buyer Management Screens



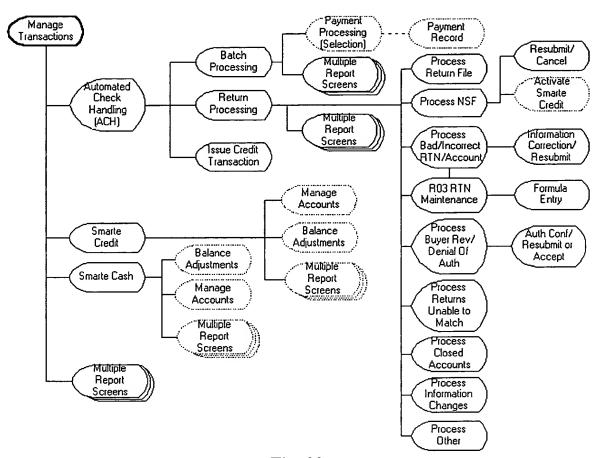


Fig. 22
Administration – Transactions/Payments/Accounts Management Screens

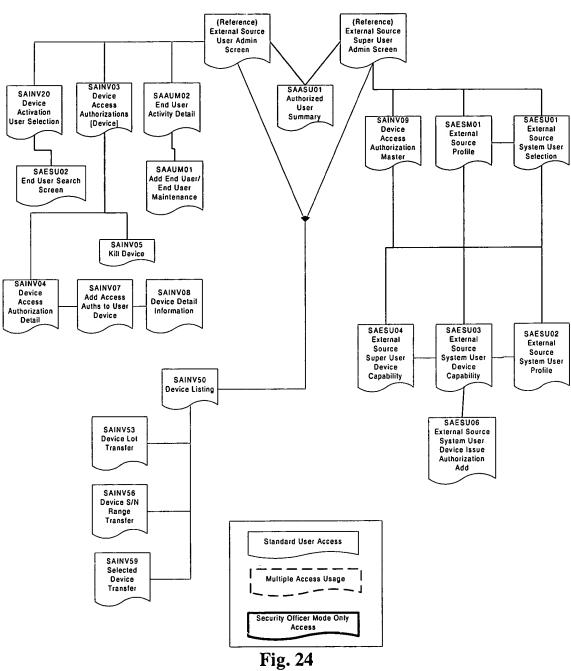
ADMINISTRATION USER SCREEN INTERACTION SAINV01 SAIMP01 Inventory Import Device Maintenance SAIMP20 Info to Stock SAMAA01 Selection Import Mass Auth Authorized Assignment User Information SAASU01 SAINV02 Authorized Device Detail User Summary SAAUM01 SAAUM02 SAINV03 Add End User SAINV05 SAINV20 End User End User Device Kill Device Device Activity Detail Maintenance Access Activation Authorizations User Selection [Device] SAINV09 SAINV06 Device External SAINV06 Access Source External Authorization Selection Master Source Selection SAESU02 End User Search SAINV04 SAESU01 Screen SAESM01 SAINV07 SAINV05A SAINV08 External Device Kill Device External Add Access Device Detail Source Auths to User Access Source System User Authorization Information Device Authorizations Profile Selection Detail SAINV50 Device Listing SAESU03 SAESU04 SAESU02 External External External Source ADMIN Source Super Source System User USER System User User Device Device SAINV51 Capability Profile Capability SAINV52 Device Lot issue to **Device Lot** Transfer External Source SAESU06 SAESU05 External Source External SAINV54 Source System User SAINV55 Device Issue Device S/N Device Issue Device S/N Authorization Authorization Range Issue Range Add Add to External Transfer Source SAINV57 SAINV58 Selected Selected Device Issue Standard User Access to External Transfer Source Multiple Access Usage Security Officer Mode Only Access

Fig. 23
Authentication



16/74

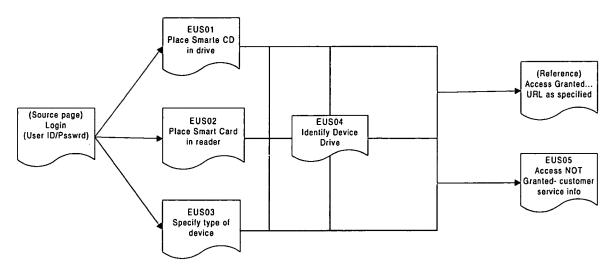
EXTERNAL SOURCE USER SCREEN INTERACTION

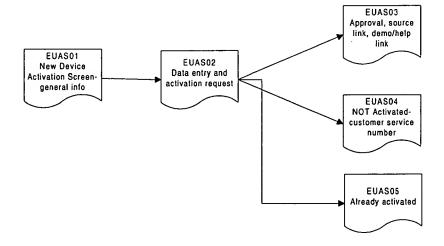


Authentication



End User Screen Interaction





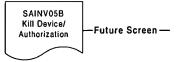


Fig. 25
Authentication



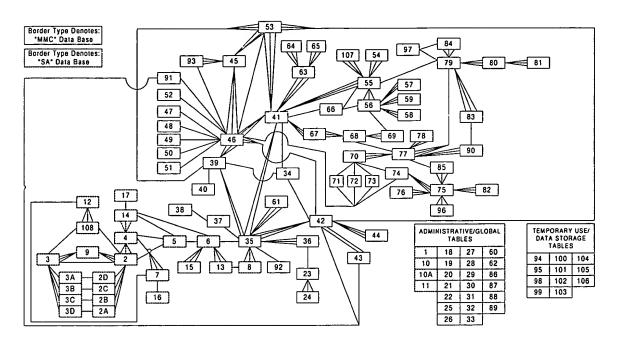


Fig. 26 System Data Structure

				•
1	Smarte Authentication System Administration Data		51	Accounts Type Specific – Smarte Credit Card
2	Smarte Authentication User Device Master		52	Account Block Details
2A	Smarte Authentication Device Specific (Smarte CD)		53	Fees and Commission
2B	Smarte Authentication Device Specific (Smart Card)		54	Product Category Master
2C	Smarte Authentication Device Specific (RSA Token)		55	Product Class Master
2D	Smarte Auth Device Specific (Secure Comp. Token)		56	Product Master
3	Smarte Authentication Device Inventory Master		57	Product - Sub Products List
3A	Smarte Auth Device Inventory Specific (Smarte CD)		58	Product - Keywords List
3B	Smarte Auth Device Inventory Specific (Smart Card)		59	Product – Quantity Allocation
3C	Smarte Auth Device Inventory Specific (Smart Card)		60	Notification Codes
3D	SA Device Inventory Specific (Secure Comp. Token)		61	Notification Master
4	Smarte Authentication END User Master		62	Shipment Methods
5	Smarte Authentication Authorization Master		63	Shipment Method
6	Smarte Authentication External Source Master		64	Shipment Method Limits
7	Smarte Authentication External Source Device		65	Shipment Location Limits
8	Smarte Auth External Source User Device Issue Auth		66	Tax Details
9	Smarte Authentication Device Lot Master		67	Seller Order ID Master
10	Smarte Authentication Device Access Log		68	Order Master
10A	Smarte Authentication Device Access Log ARCHIVE		69	Line Items
11	Smarte Authentication Specific System Activity Log		70	Transaction (Common)
12	Smarte Authentication Product Master		71	Transaction (Account Type Specific - Smarte Cash)
13	Smarte Auth External Source Device Issue Authority		72	Transaction (Account Type Specific - Smarte Credit)
14	Smarte Auth External Source/Auth User Cross Ref		73	Transaction (Account Type Specific - Admin)
15	Smarte Auth External Source Device Control Auth		74	Transaction (Account Type Specific – Smarte ACH)
16	Smarte Authentication Device Auth Overrides		75	Transaction - Smarte Credit Loan Record
17	Smarte Authentication ES Based End User Detail		776	Transaction - Smarte Credit Payment Log Reference
18	System Administration Data		77	Order Transaction - Master
19	System Administration Data – Signup		78	Order Transaction - Details
20	System Administration Data – Product		79	Batches
21	System Administration Data – Order		80	Batch Payment Due
22	System Administration Data – Transaction		81	Payment Log Table
23	Identifier Type Master		82	Transaction - Smarte Credit Interest Log Reference
24	Identifier Type Master – List Specific		83	Transaction – Returns
25	Random Question Master		84	FED Ready File – FED File Info Table
26	General Parameters		85	Pay Down Table System Administration Data - TCN
27	Holiday Master		86 87	System Administration Data - TCN System Administration Data - BCN
28	Activity Master		88	System Administration Data - Order Transaction
29 30	Entity Activity Log		89	System Administration Data – Order Transaction System Administration Data – Return Transaction
31	Telephone Master		90	Return Transaction - Details
32	Zip Master State Master		91	Sub Buyer Accounts - Allocation
33	Time Zone Master		92	Chat
34	Sign up Details		93	ISO Account Details
35	User Master		94	Order Batch EXE
36	Identifier Master (User)		95	Shopping Bag Table
37	User Block Details		96	Smarte Credit Late Fee Log
38	Administration Users Master		97	FED Ready File Status
39	FI Master		98	TMP RECORD STORE: Accounts used in Order
40	FI Specific – Banks		99	TMP RECORD STORE: Keyword in Order
41	Seller Master		100	TMP RECORD STORE: Keywords used in Order
42	Buyer Master		101	TMP RECORD STORE: Product Category Path
43	Buyer Parent-Child Relation		102	TMP RECORD STORE: Product Class Order
44	Buyer Shipping Details		103	TMP RECORD STORE: Shop Cart Items
45	ISO Profile		104	TMP RECORD STORE: Search Items
46	Accounts Master		105	TMP RECORD STORE: Activate/Interest Process Flag
47	Accounts Type Specific – Smarte Credit		106	TMP RECORD STORE: MoveMoney Identifier Master
48	Accounts Type Specific – Smarte ACH		107	Product Class Category Master
49	Accounts Type Specific - Smarte Cash		108	Smarte Authentication Product/Device Cross Reference
50	Accounts Type Specific – Admin	J		

Fig. 27 Key to Fig. 26 System Data Structure

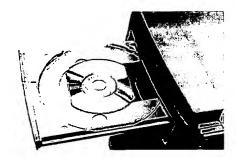


Fig. 28



Fig. 29

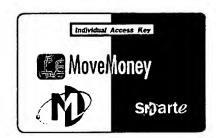


Fig. 30



Fig. 31



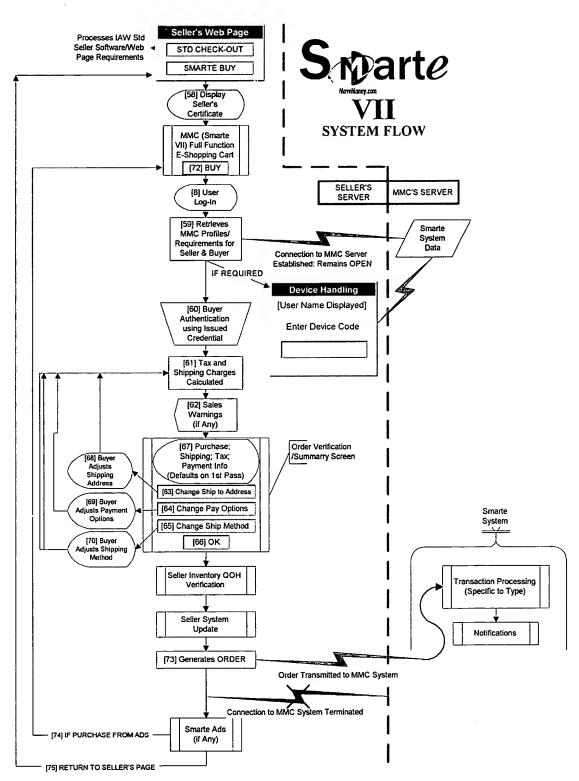


Fig. 32

A Constant

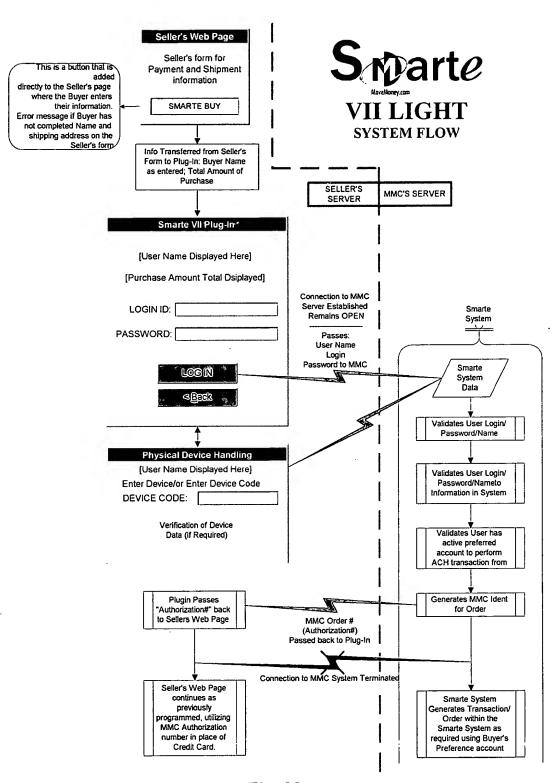


Fig. 33



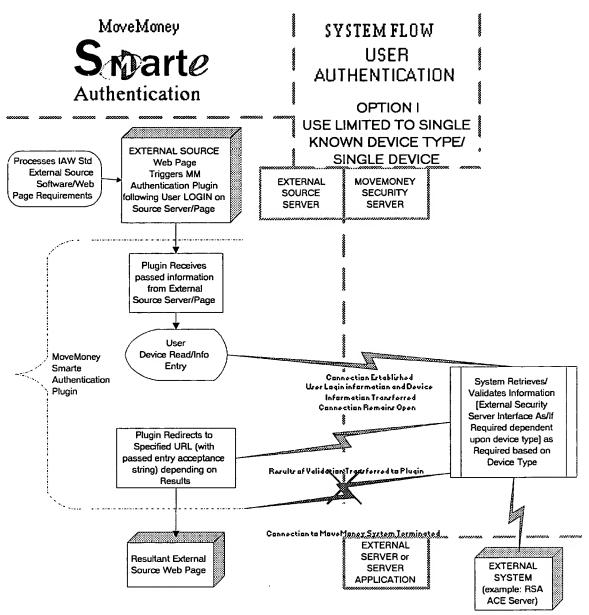
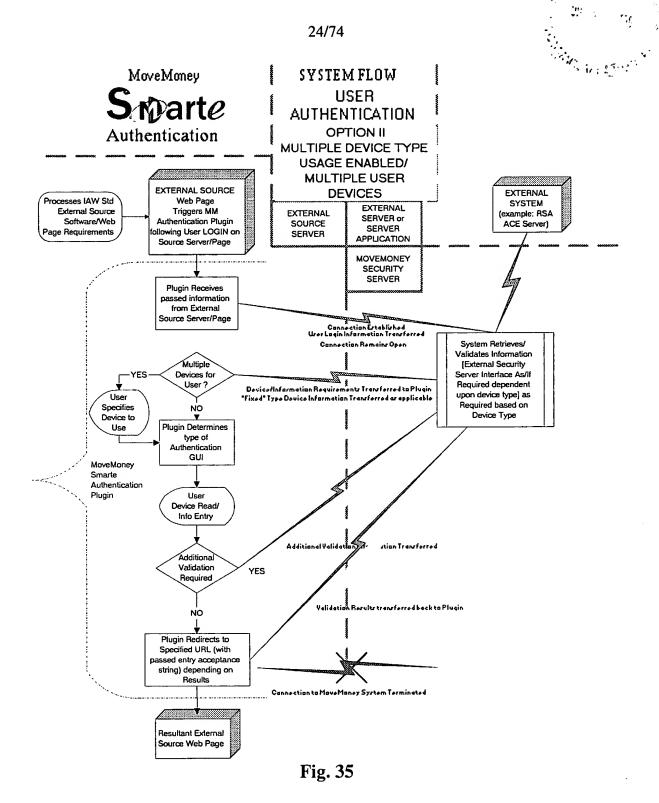
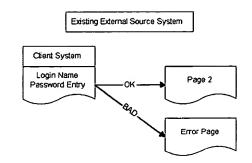


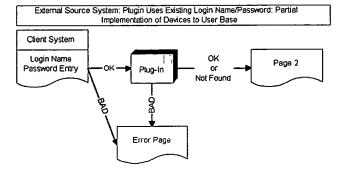
Fig. 34



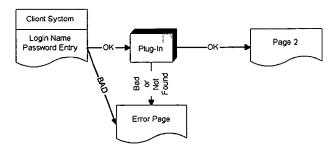


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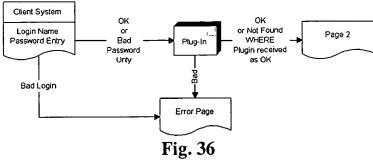




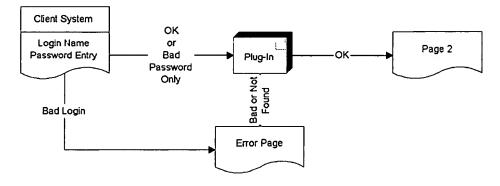
Eexternal Source System: Plugin Uses Existing Login Name/Password: Complete Implementation of Devices to User Base



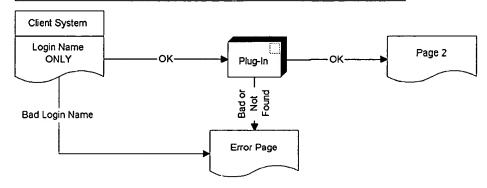
External Source System: Plugin Uses Existing Login Name/Existing Optional Universal Password: Partial Implementation of Devices to User Base



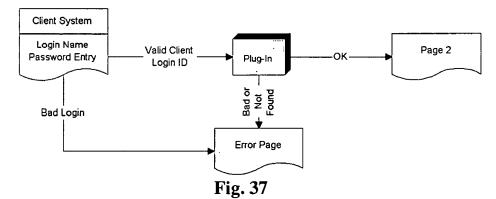
External Source System: Plugin Uses Existing Login Name/Existing Optional Universal Password: Complete Implementation of Devices to User Base



External Source System: Plugin Uses Existing Login Name/NO Password: Complete Implementation of Devices to User Base



External Source System: Plugin Uses Existing Login Name/Mandatory Univeral Password: Complete Implementation of Devices to User Base





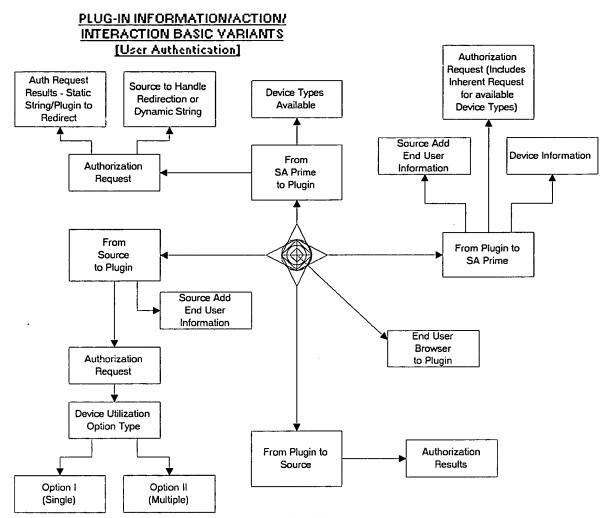


Fig. 38



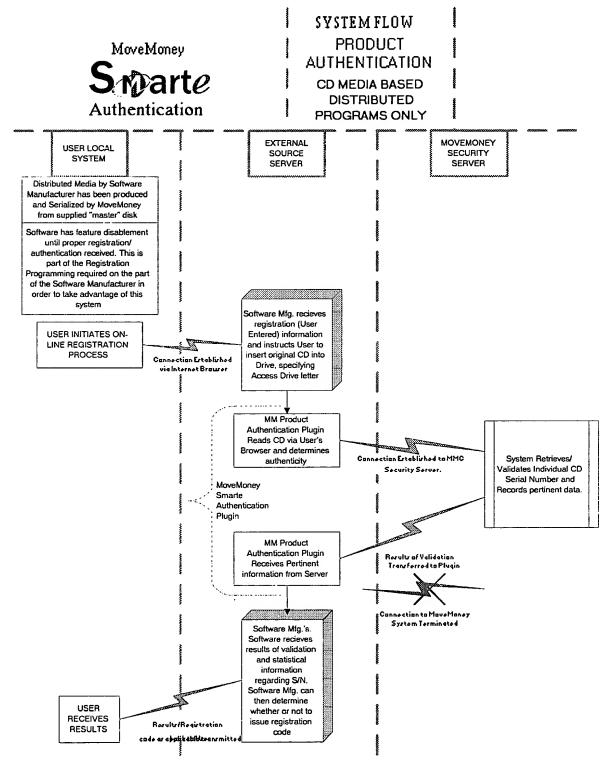


Fig. 39

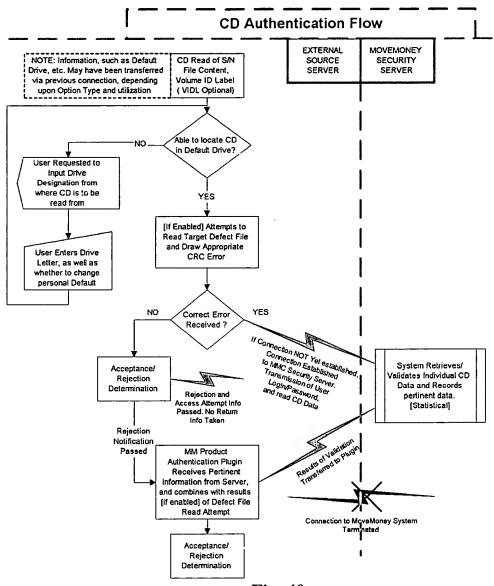


Fig. 40



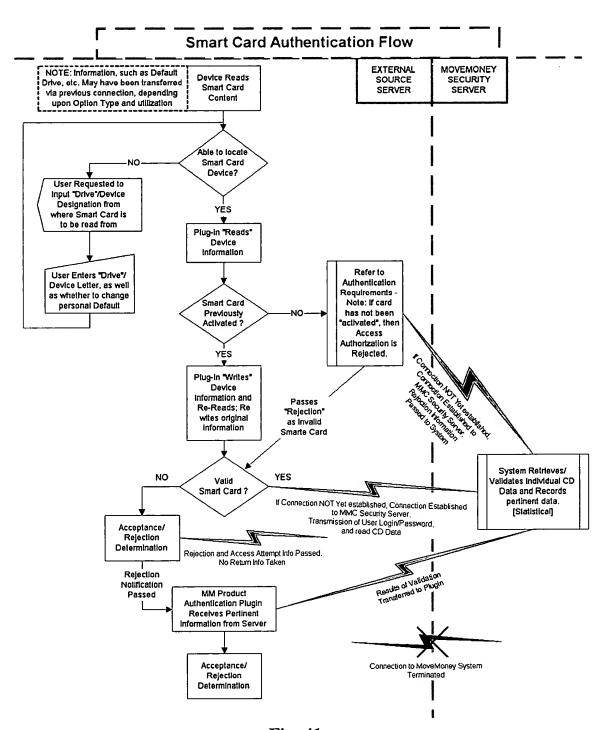


Fig. 41



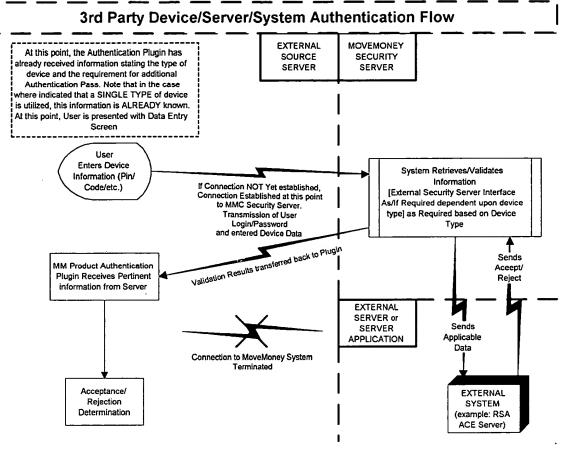


Fig. 42

32/74

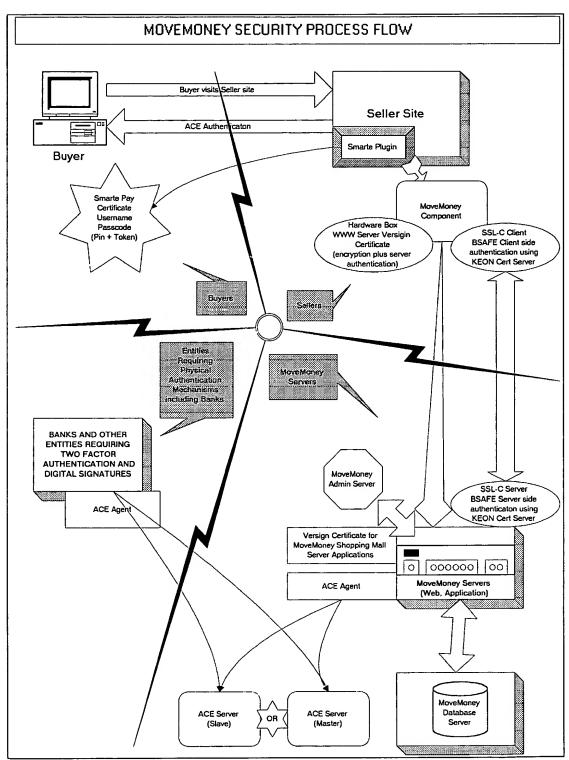


Fig. 43

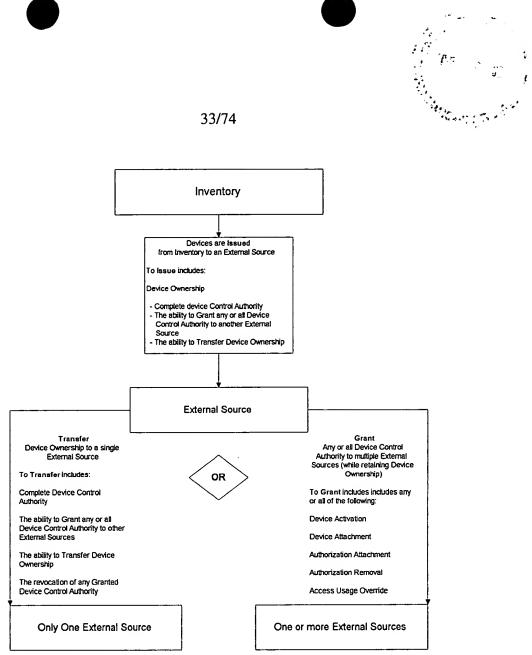
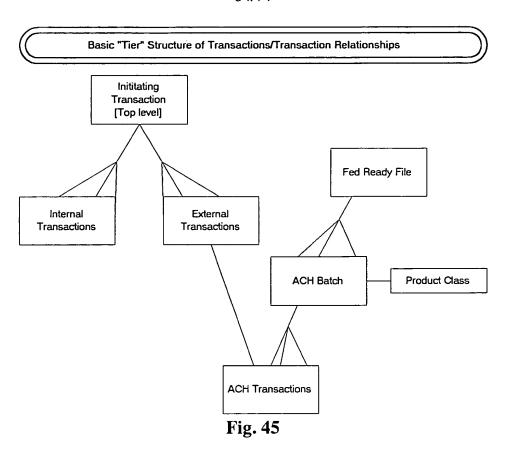
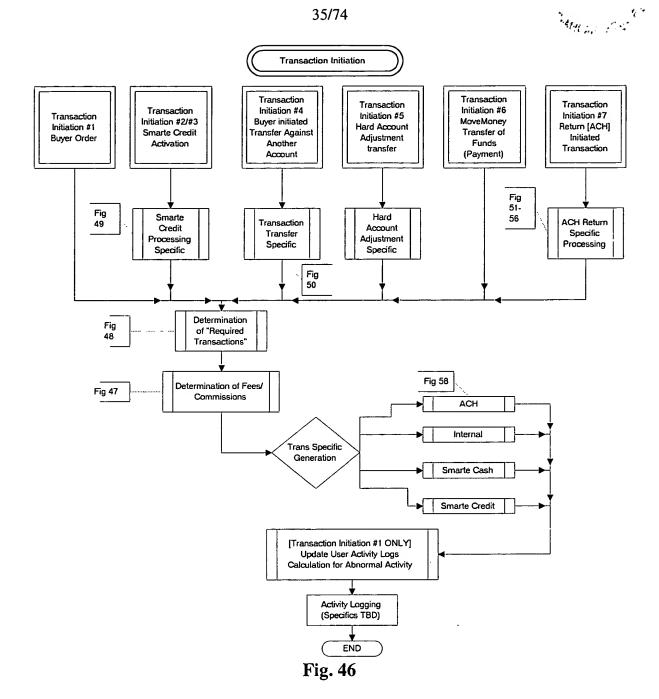


Fig. 44

34/74







36/74

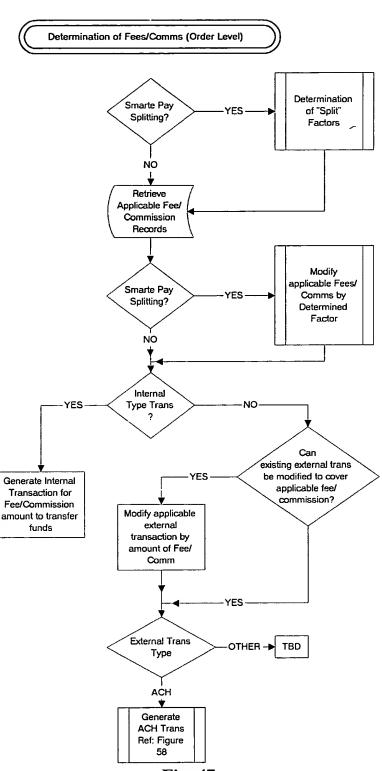
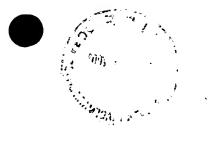


Fig. 47



37/74

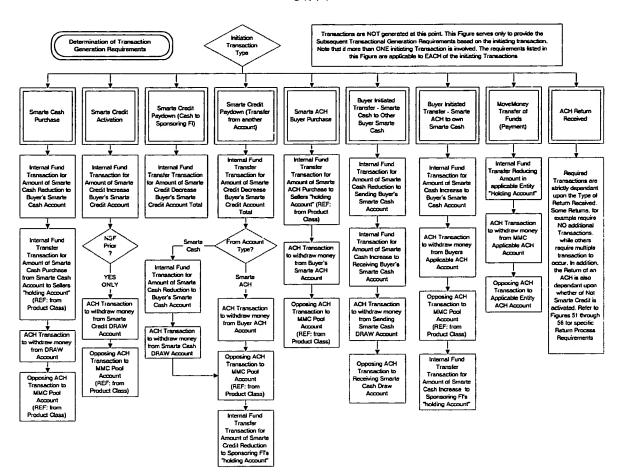


Fig. 48

Smarte Credit Initiation Processing

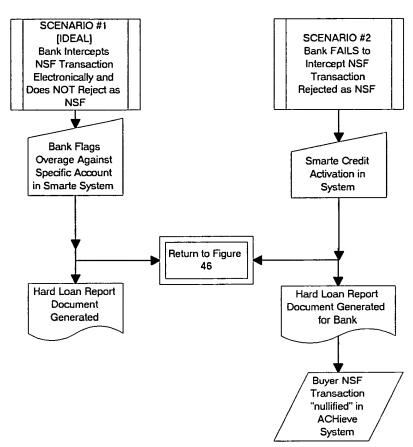
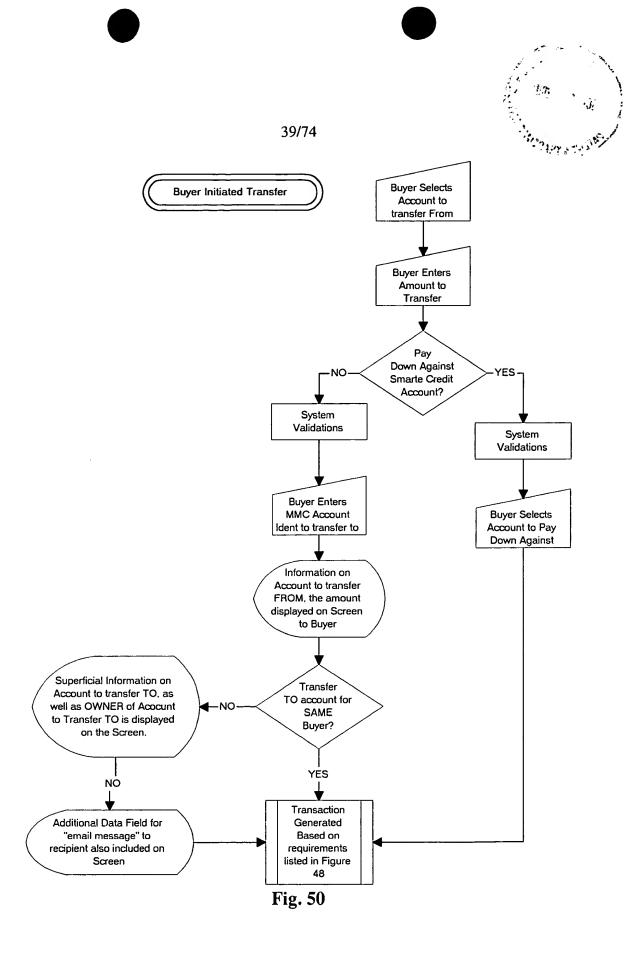


Fig. 49





40/74

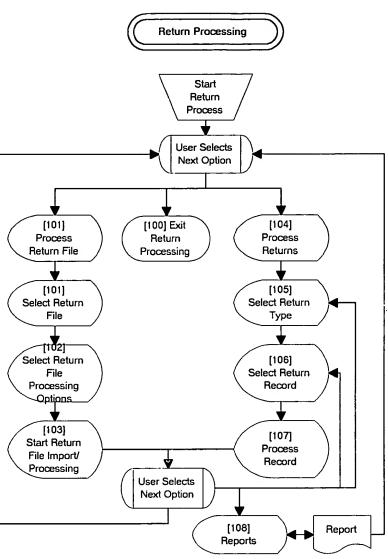


Fig. 51

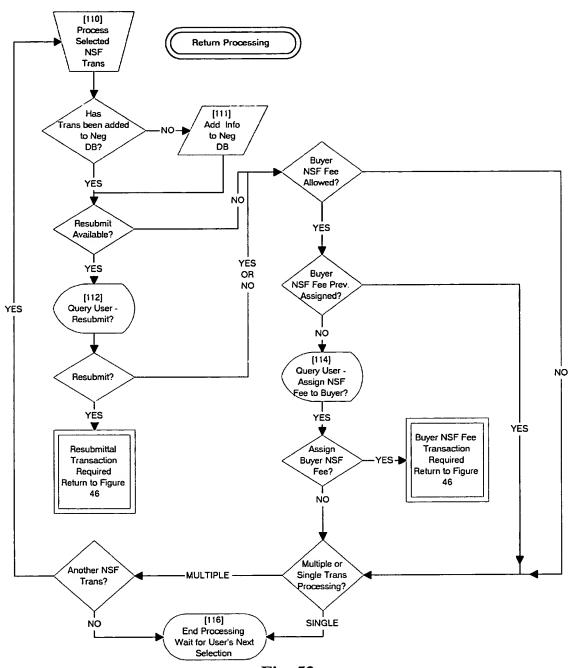
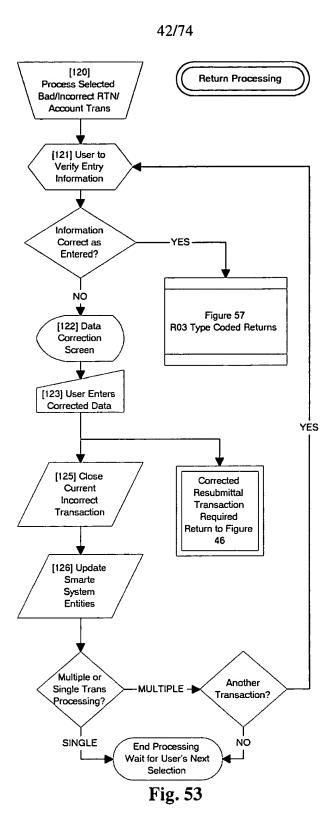
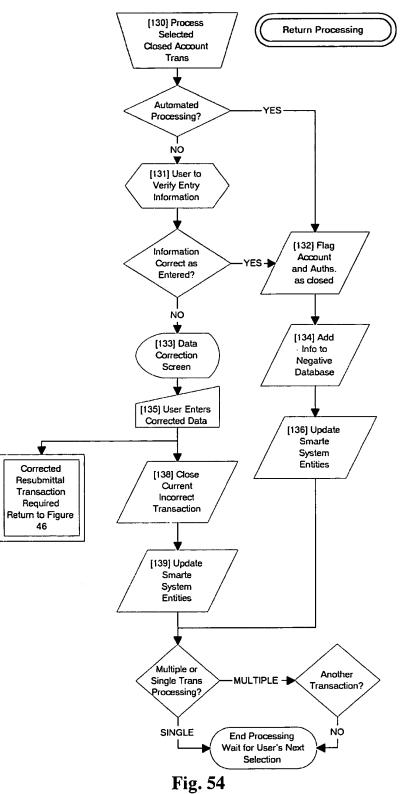


Fig. 52







44/74

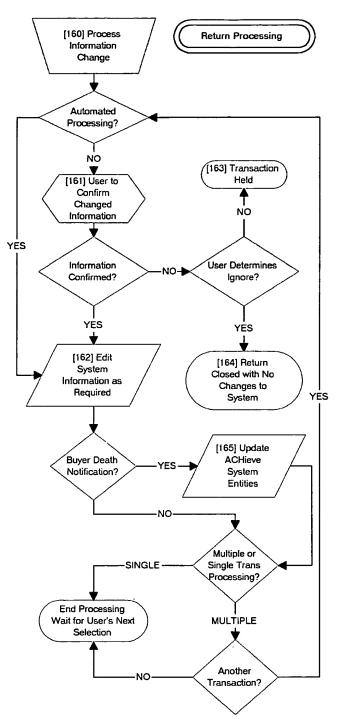


Fig. 55

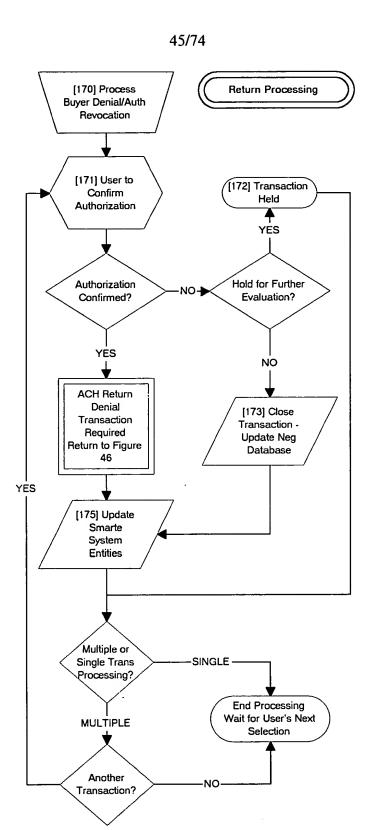




Fig. 56



46/74

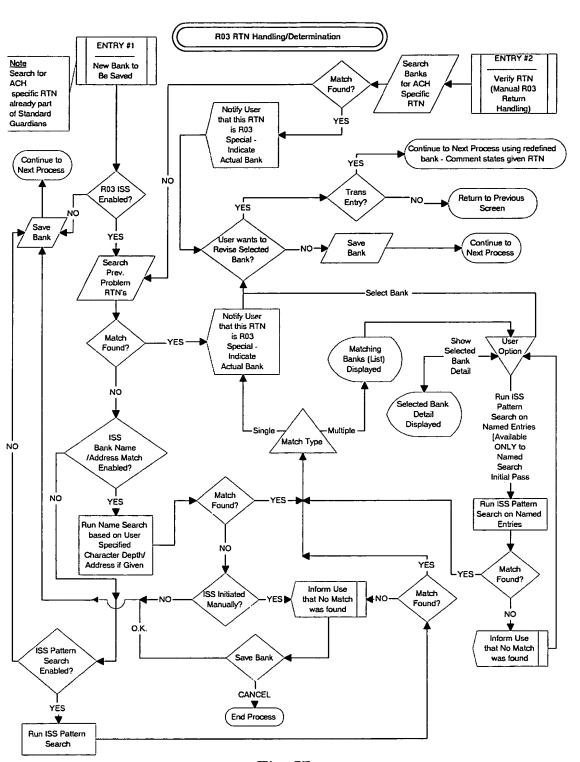


Fig. 57



47/74

ACH Transaction Generation

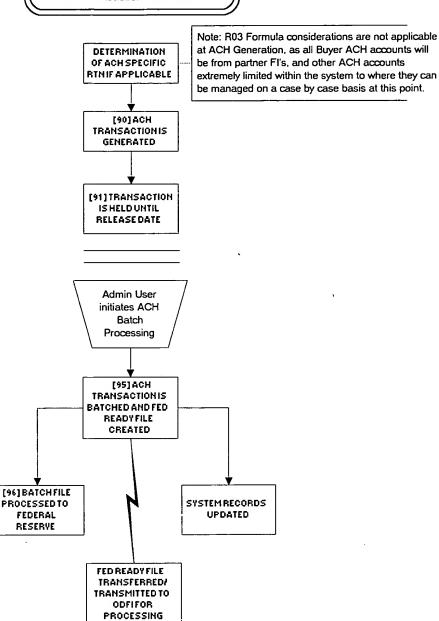


Fig. 58



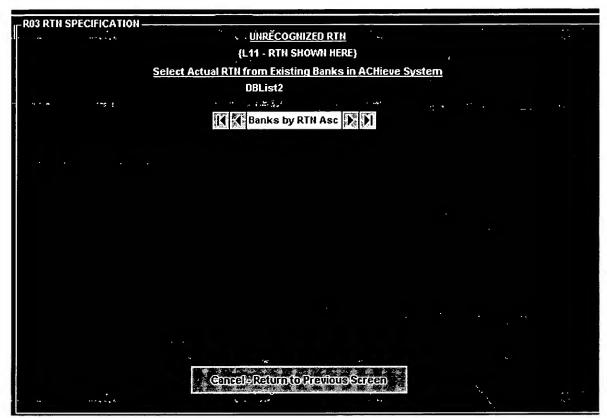


Fig. 59

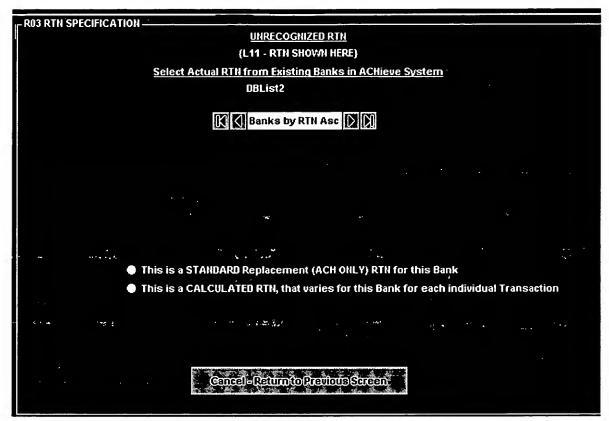


Fig. 60

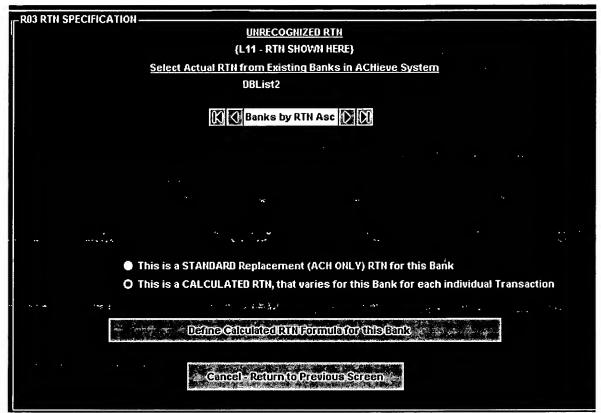


Fig. 61

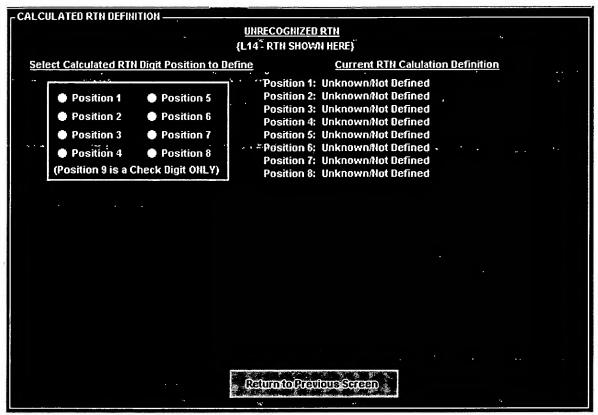


Fig. 62



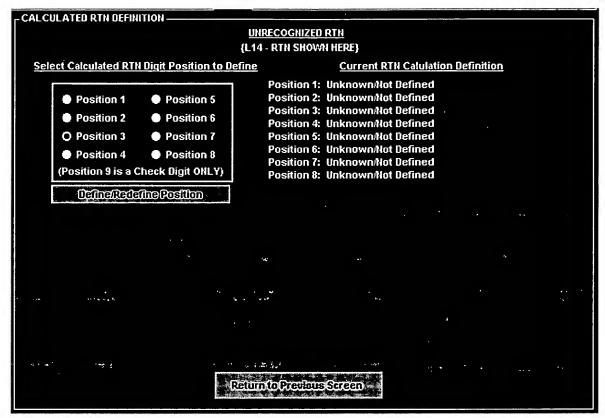
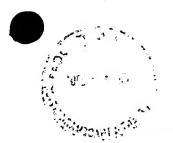


Fig. 63

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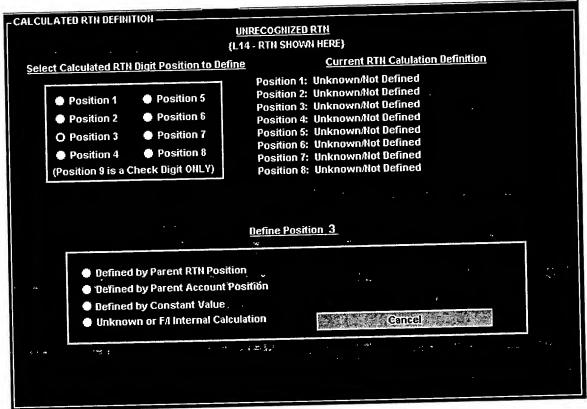


Fig. 64

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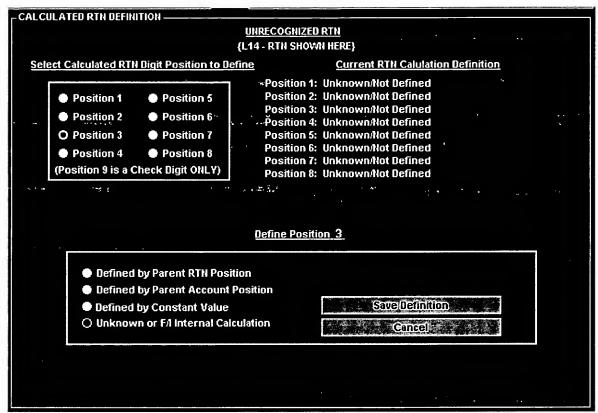


Fig. 66

	<u>IŘÉĆOGNIZED RTN</u> 4 - RTN SHOWN HERE}			
Select Calculated RTN Digit Position to Define Position 1 Position 5 Position 2 Position 6 O Position 3 Position 7 Position 4 Position 8 (Position 9 is a Check Digit ONLY) Position 1: Unknown/Not Defined Position 2: Unknown/Not Defined Position 3: Unknown/Not Defined Position 6: Unknown/Not Defined Position 7: Unknown/Not Defined Position 8: Unknown/Not Defined Position 8: Unknown/Not Defined				
 Defined by Parent RTN Position Defined by Parent Account Posi Defined by Constant Value Unknown or Fil Internal Calculat 	Swelleinition			
n de	And the second s			

Fig. 67



CRITICAL ACTIVITY CALCULATION VALUES			
FIELD NAME	TYPE	LEN	DESCRIPTION
AVGNOFBUYS	DOUBLE		AVG # OF BUYS PER ACTIVE DAY (ACTIVE ONLY)
AVGNOFWBUYS	DOUBLE		AVG # OF BUYS PER ACTIVE WEEK (ACTIVE ONLY)
TOTBUYS	LONG		TOTAL # OF BUYS
TOTACTBUYS	CURRENCY		TOTAL AMOUNT OF BUYS TO DATE
AVGNOFBUYA	CURRENCY		AVG TOTAL AMOUNT OF BUYS PER DAY (ACTIVE ONLY)
AVGNOFWBUYA	CURRENCY		AVG TOTAL AMOUNT OF BUYS PER WEEK (ACTIVE ONLY)
TDTOTENTSBY	INTEGER		TOTAL NUMBER OF BUYS FOR CALC DATE
TDTOTENTSBYD	CURRENCY		TOTAL AMOUNT OF BUYS FOR CALC DATE
TWTOTENTSBY	INTEGER		TOTAL NUMBER OF BUYS FOR CALC DATE WEEK
TWTOTENTSBYD	CURRENCY		TOTAL AMOUNT OF BUYS FOR CALC DATE WEEK
TOTBDS	LONG		TOTAL NUMBER OF ACTIVE BUY DAYS
TOTBWS	LONG		TOTAL NUMBER OF ACTIVE BUY WEEKS
CALCDATE	DATE		CURRENT CALCULATION DATE
CALCDATEW	DATE		CURRENT CALCULATION DATE (for week calculations)
DEVDTRGGRB	DOUBLE		DAILY DEVIATION % AT WHICH BUYER IS WARNED (SELF
			SET BY BUYER) – PARENT BUYERS ALSO NOTIFIED
DEVDTRGGRW	DOUBLE		DAILY DEVIATION % AT WHICH MMC/APPLICABLE BANK
			IS NOTIFIED (IF TRIGGER SET) OF ABNORMAL ACTIVITY.
			BUYER/PARENT BUYER ALSO WARNED
DEVDTRGGRS	DOUBLE		DAILY DEVIATION % AT WHICH BUYER ACCOUNT IS
			SUSPENDED PENDING VERIFICATION OF - METHOD:
DELANTROOPE	DOUBLE.		WEEKLY DEVIATION % AT WHICH BUYER IS WARNED
DEVWTRGGRB	DOUBLE		(SELF SET BY BUYER) – PARENT BUYERS ALSO
			NOTIFIED
DEVWTRGGRW	DOUBLE		WEEKLY DEVIATION % AT WHICH MMC/APPLICABLE
DEVVIIIGONV	DOODLL		BANK IS NOTIFIED (IF TRIGGER SET) OF ABNORMAL
			ACTIVITY, BUYER/PARENT BUYER ALSO WARNED
DEVWTRGGRS	DOUBLE		WEEKLY DEVIATION % AT WHICH BUYER ACCOUNT IS
			SUSPENDED PENDING VERIFICATION OF - METHOD:
			TBD

Fig. 68







Accounts Type Specific - Smarte Credit

Table Name : MMC_ACC_SM	MARTE_CREDIT		
MMC_ACC_ID	VARCHAR(20)	NN	MMC Account ID
MMC_ID	VARCHAR(20)	NN	MMC_ID of user
MMC_FI_HOLD_ACC_ID	VARCHAR(20)	NN	Holding Account of FI in MMC. (Admin Account of FI)
MMC_ACH_ACC_ID	VARCHAR(20)		ACH Account ID tied to the MMC_ACC_ID
MMC_SPON_FI_ID	VARCHAR(20)		MMC Account ID of the Sponsoring FI
NEXT_LOAN_NUM	INT		Latest Loan Number
TOTAL_AMT	MONEY	NN	Total Amount of Smarte Credit extended by Bank Against this Account
CUR BAL	MONEY	NN	Current Balance
BLOCKED_AMOUNT	MONEY		Blocked Amount
INT_CAL_DELAY	INT	-	Number of Days to delay Calculation of Interest
INT_RATE	FLOAT	NN	Default Interest Rate
ACT_FEE_CHARGE	MONEY		Fees / Charge for Activation
TAX_YEAR	INT		Four Digit Calendar Year. – Indicates current year for which interest calculations are being maintained
INT_PAID_CUR_YEAR	MONEY	NN	Total Amount of Interest Paid during Current Calendar Year
INT_PAID_PREV_YEAR	MONEY	NN	Total Amount of Interest Paid during Previous Calendar Years
PAY_DUE_DATE	INT	NN	Day of Month Payment Due
MIN_INT_CHARGE	MONEY		Minimum Interest Charge Allowed
MIN_MON_AMT_DUE	MONEY		Minimum Monthly Amount Due
DEF_PER_BAL_DUE	FLOAT		Default Percentage for Total Balance Due
FI_ACC_REF	VARCHAR(50)		FI Internal Reference for Account
PER_LATE_FEE	FLOAT		Percentage of Balance to Calculate Late Fee from
FLAT_RATE_LATE_FEE	MONEY		Flat Rate to Calculate Late Fee
MAX_FLAT_LATE_FEE	MONEY		Maximum Flat Rate to Calculate Late Fee
WAIVE_NSF_FEE	CHAR(1)		Yes / No
FI_COMMENTS	VARCHAR(500)		Comments entered by FI
STATUS	CHAR(1)		Status
NEXT_PAY_DUE_DATE	DATE/TIME		This is the NEXT calculated date that Payment is Due By.
NEXT_PAYDUE_AMOUNT	MONEY		This is the Amount (Current Balance) remaining on minimum amount remaining for Buyer to Pay on this Account prior to NEXT_PAY_DUE_DATE
LFC_CARRYOVER_BAL	MONEY		This is the amount remaining for the Buyer to Pay during this specific pay period.
LFC_YEAR	INT		This is the current Calculation YEAR for Late Payments
LF_PAID_CUR_YEAR	MONEY	NN	Total Amount of Late Payments Paid during Current Calendar Year
LF_PAID_PREV_YEAR	MONEY	NN	Total Amount of Late Payments Paid during Previous Calendar Years

Fig. 69





Transaction – Smarte Credit Loan Record
Table Name: MMC_TRAN_SMARTE_CREDIT_LOAN

Table Name : MMC_TRAN_S	MARTE_CREDIT_LO	AIN	
MMC_ACC_ID	VARCHAR(20)	NN	MMC Account ID (Smarte Credit Account Only)
MMC_ACC_LOAN_ID	VARCHAR(23)		Concatenation of Smarte Credit Account ID and Next Loan Number (Padded with zeros) of activation no (000-999).
NEXT_PAY_NUM	INT		Next Sequential Payment Number to Use within Payment Log Data Table
CUR_BAL	MONEY	NN	Current Balance
NEXT_INT_CAL_DATE	DATETIME		Next Interest Calculation Date
LAST_INT_CAL_DATE	DATETIME		Last Date Interest Calculated
ORG_INT_RATE	FLOAT	NN	Original - Monthly Interest Rate
CUR_INT_RATE	FLOAT	NN	Current - Monthly Interest Rate
LOAN_ACTIVATE_DATE	DATETIME		Loan Activated Date
FI_LOAN_REF	VARCHAR(50)		Individual FI's Reference Number for this Loan
TOT_INT_CHARGED	MONEY		Total Interest Charged to Date against this Loan
ORG_LOAN_AMT	MONEY	NN	Original Loan Amount
LOAN_BALANCE	MONEY		
LAST_INT_CHARGED	MONEY		Interest Charged in Last Calculation Period
ACT_FEE_CHARGED	MONEY	NN	Fee Added to Balance for Activation
LOCKED_INT_ID	CHAR(1)		
MMC_TRAN_ID	VARCHAR(20)		MMC Transaction ID
MMC_TRAN_NO	INT		MMC Transaction No.
MMC_TRAN_DATE	DATETIME		MMC Transaction Date
TOTAL_TRAN_AMT	MONEY		Total Transaction Amount
TOT_LFC_CHARGED	MONEY		Total Late Payment Fees Charged to Date against this Loan

Fig. 70

Smarte Credit Late Fee Log
Table Name: MMC_SMARTE_CREDIT_LF_LOG

MMC_ACC_ID	VARCHAR(20)	NN	MMC Account ID (Smarte Credit Account Only)
MMC_ACC_LOAN_ID	VARCHAR(23)	NN	Concatenation of Smarte Credit Account ID and Next Loan Number (Padded with zeros) of activation no (000-999). This specifically refers to the Individual LOAN to which the Late Fee was attached.
LF_APP_DATE	DATETIME		System Date where Late Fee Applied
LF_AMOUNT	MONEY		Amount of Late Fee Applied
LFC_CARRYOVER	MONEY		This is the amount remaining for the Buyer to Pay during this specific pay period at the time the Late Fee was applied.

Fig. 71

Fig. 72







Table: Batch Payment Due

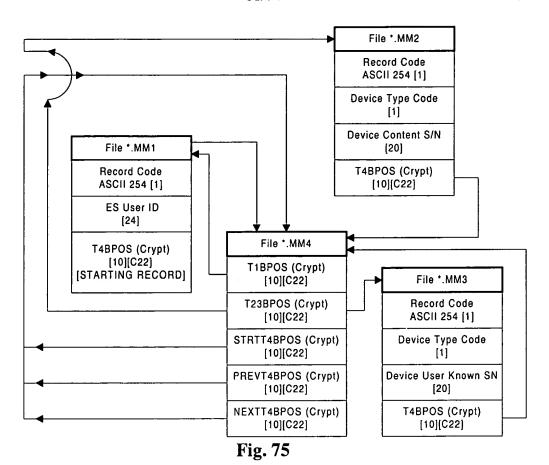
rabio: Baton raymont Bao			
BCN	VARCHAR(20)	NN	Batch Control Number
BATCH_ENTITY	VARCHAR(20)		MMC ID of Entity to make Payment To
PAY_ACC_TO	VARCHAR(20)		MMC ID of Account to make Payment To
PAY_ACC_FROM	VARCHAR(20)		MMC ID of Account to take Payment From
ORG_PAY	MONEY		Amount (\$) of Payment Due (Original as Calculated from initial Batch Process)
ACT_PAY	MONEY		Actual Amount (\$) of Payment Due (as Modified from Original Due to Payments)
PAY_DUE_DATE	DATETIME		Date Payment Due
PAY_DATE	DATETIME		Date Payment Made
PAY_BCN	VARCHAR(20)		Batch Control Number of Payment Batch
PAY_TCN	VARCHAR(15)		TCN of Payment ACH Trans
STATUS	VARCHAR(1)		Status Flag for Record to enable quicker / easier searches
COMMMENTS	VARCHAR(200)		Comments regarding Payment
PAY_SERIAL_NO	VARCHAR(20)		System Assigned Serial Number to the Outstanding PAYMENT

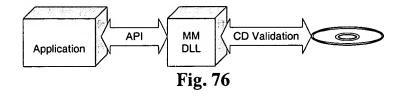
Fig. 73

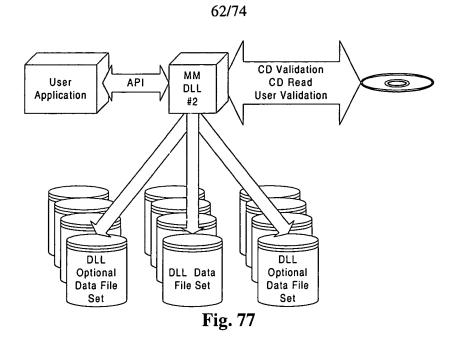
Table: Batch Payment

rabio: Baton raymont			
PAY_BCN	VARCHAR(20)	NN	Batch Control Number
BATCH_ENTITY	VARCHAR(20)		MMC ID of Entity Payment Made To
PAY_ACC_TO	VARCHAR(20)		MMC ID of Account Payment Made To
PAY_ACC_FROM	VARCHAR(20)		MMC ID of Account Payment Taken From
PAY_AMOUNT	MONEY		Amount (\$) of Payment Made
PAY_SERIAL_NO	VARCHAR(20)		System Assigned Serial Number to the Outstanding PAYMENT
PAY_DUE_DATE	DATETIME		Date Payment Due
PAY_DATE	DATETIME		Date Payment Made
MMC_TRAN_ID	VARCHAR(20)		Transaction (Master) ID Payment made under
MMC_TRAN_NO	VARCHAR(20)		Transaction (Sub) ID Payment made under

Fig. 74







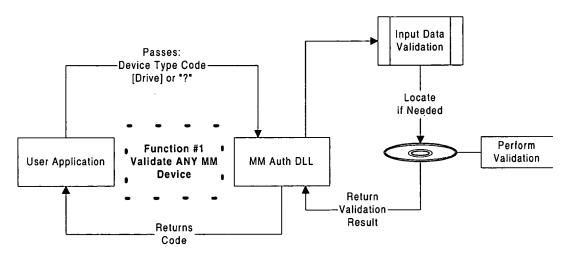
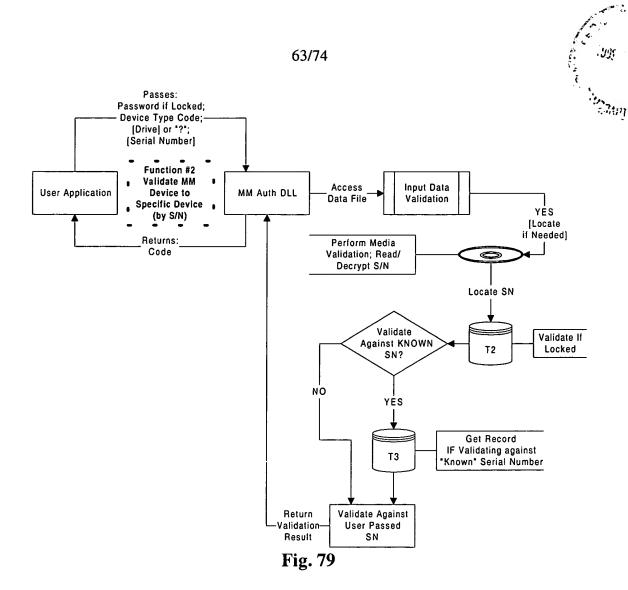


Fig. 78



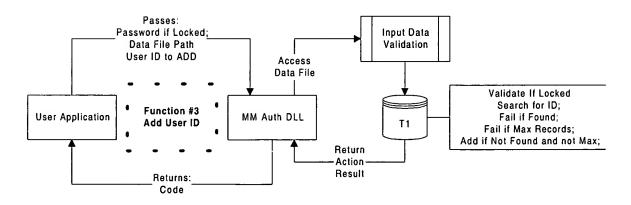


Fig. 80



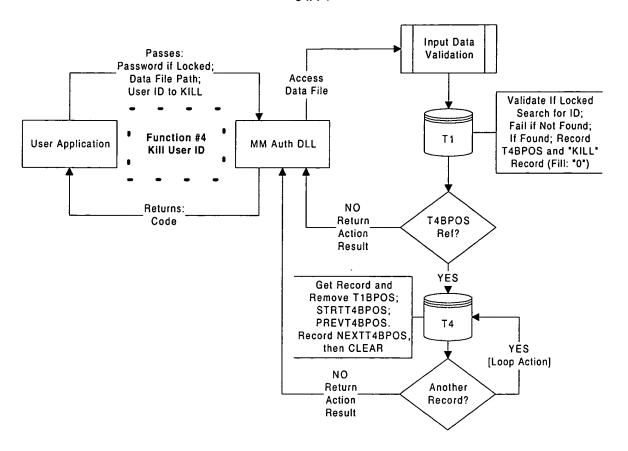
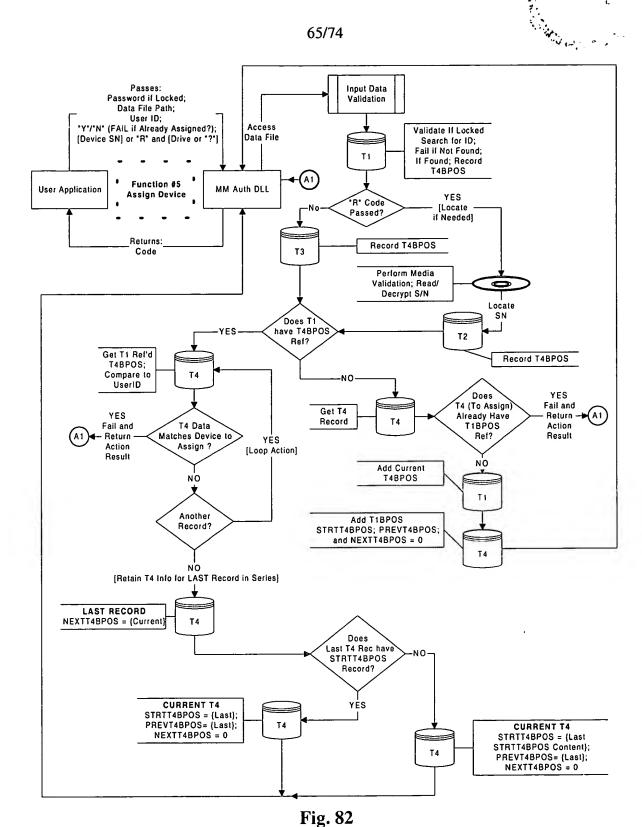


Fig. 81



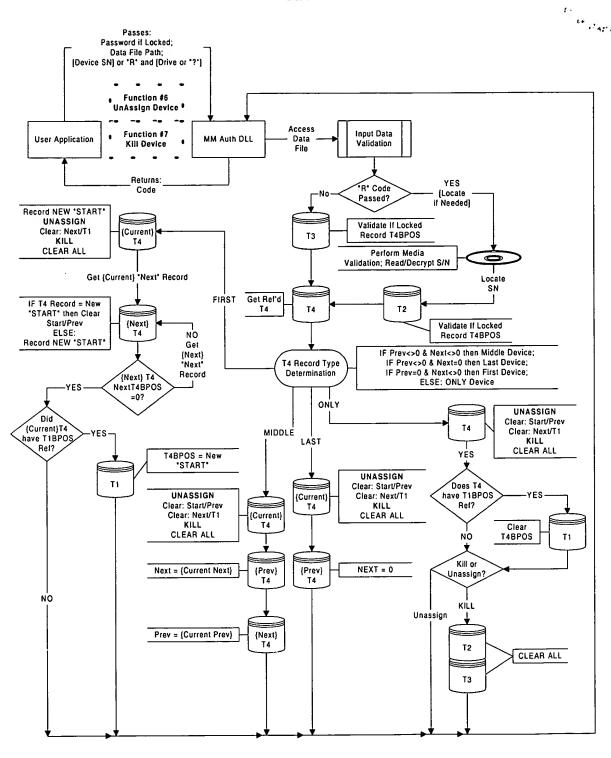


Fig. 83

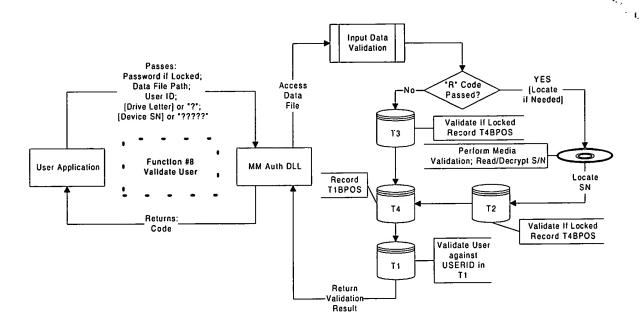


Fig. 84

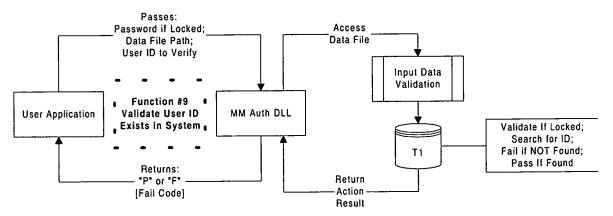


Fig. 85



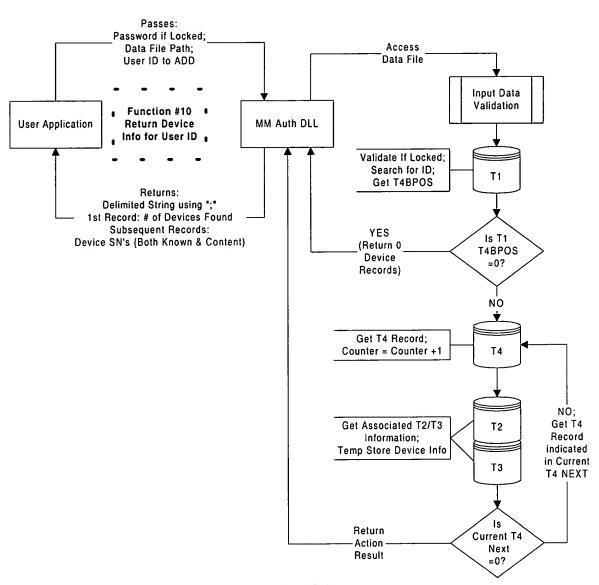


Fig. 86

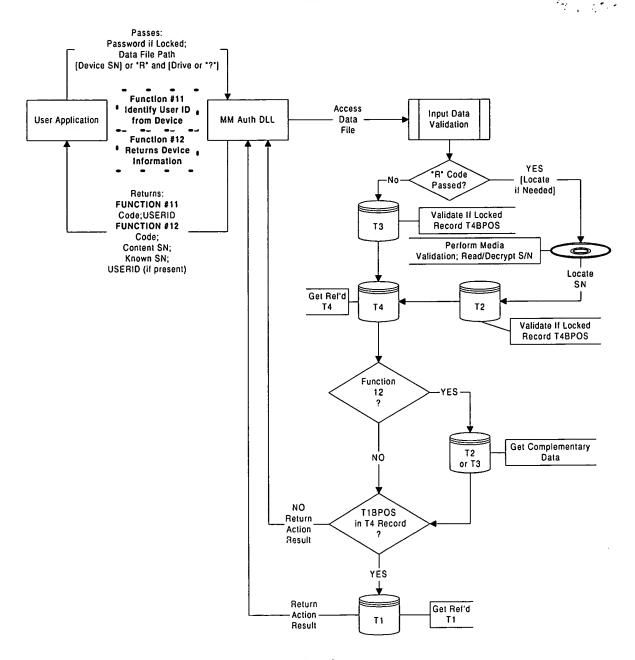


Fig. 87

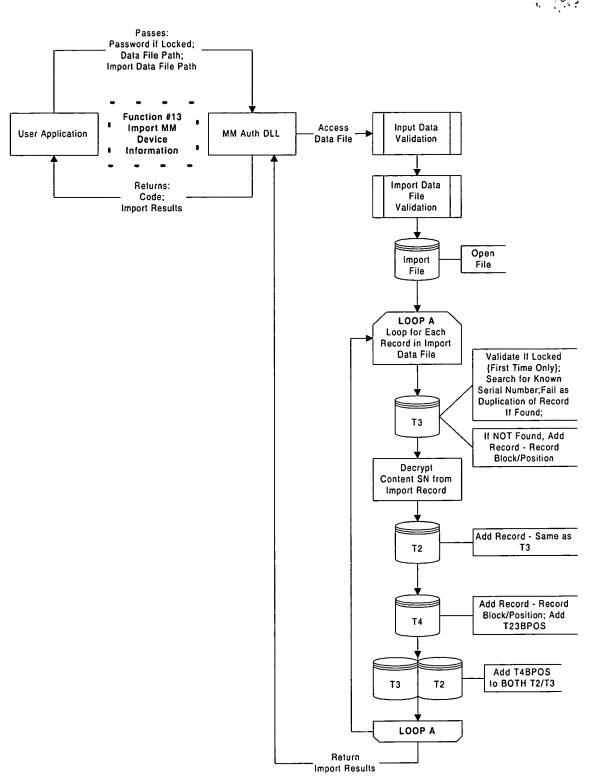


Fig. 88



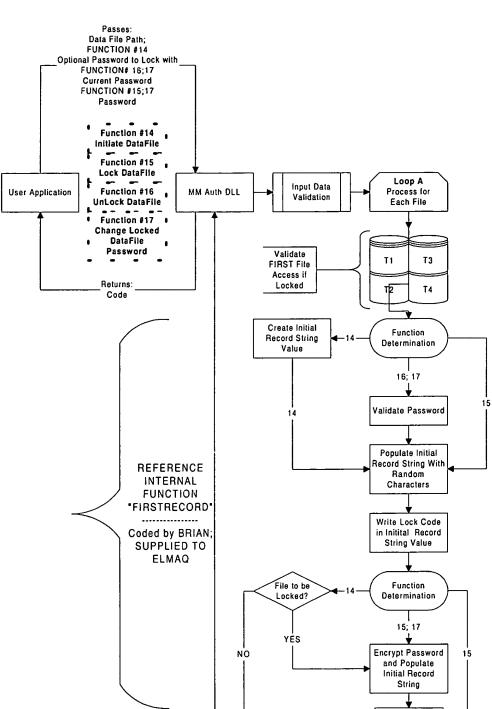


Fig. 89

-Return Results

Loop A



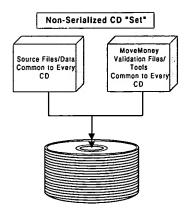


Fig. 90

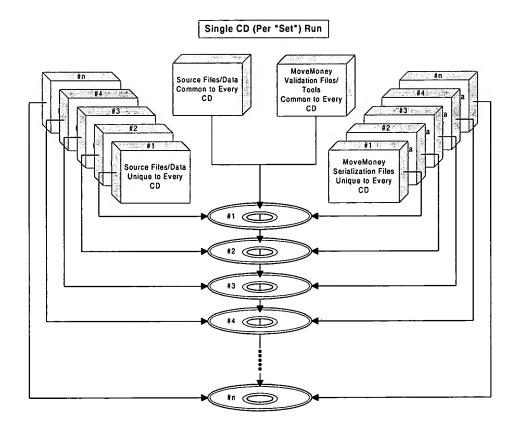


Fig. 91



Multiple CD's (Per "Set") Run

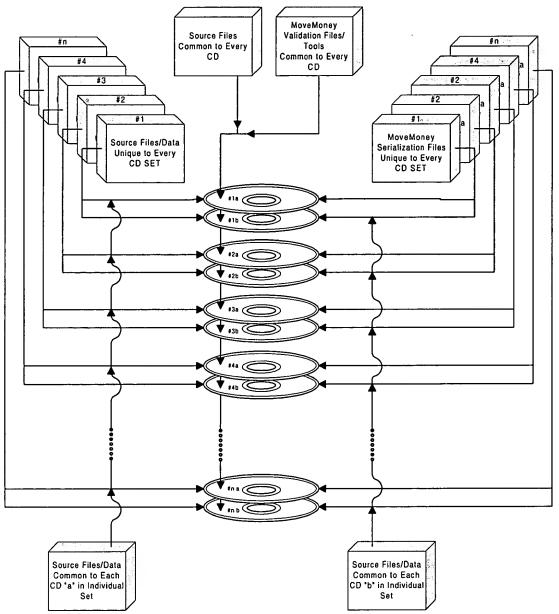


Fig. 92

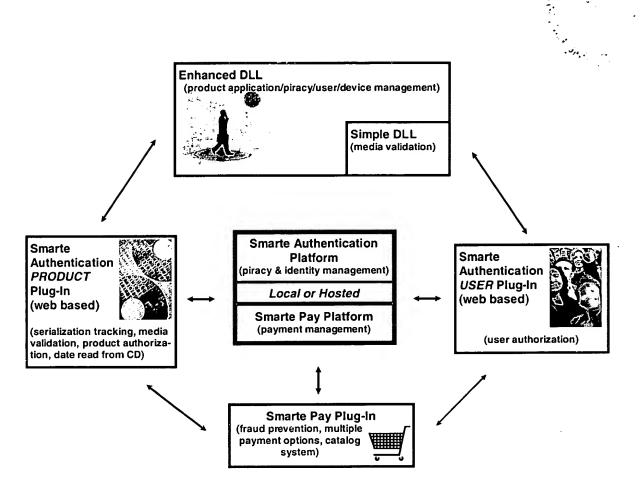


Fig. 93